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AUTHOR	Imel, Susan
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ABSTRACT

Tacit knowledge, the knowledge that workers possess but do not articulate, is associated with terms such as "skill," "know-how," "working knowledge," and "expertise" that are used to describe knowledge about and ability to perform work. Learning that takes place through apprenticeships draws heavily on tacit knowledge, and it has been connected with informal and organizational learning. Gourlay (2002) identifies two issues associated with tacit knowledge: first, whether tacit knowledge is an individual trait or a trait that can be shared by both individuals and groups and, second, whether tacit knowledge can be made explicit. If it is to be used in knowledge management systems, tacit knowledge needs be made explicit. McInerney (2002) suggests that instead of extracting knowledge from within employees to create new explicit knowledge artifacts, organizations should focus on creating a "knowledge culture" that encourages learning and the creation and sharing of knowledge. Tacit knowledge is an important element in work and workplace learning but one that needs to be examined closely in terms of how it is incorporated into organizational practices. (A 22-item annotated bibliography constitutes approximately 75 percent of the document.) (YLB)

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Susan Imel

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ERIC Clearinghouse on Adult, Career, and Vocational Education
Center on Education and Training for Employment
College of Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210-1090

CE 085 165

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Tacit Knowledge

by Susan Imel
2003

Knowledge has a number of dimensions, including explicit, implicit, and tacit. By suggesting that "we can know more than we can tell," Polanyi (1967, p. 4) describes its tacit dimension. In research studies from a variety of disciplines, tacit knowledge has been characterized as follows: personal, difficult to articulate fully, experience based, contextualized, job specific, held within, both known and unknown to the holder, transferred through conversation and narrative, and capable of becoming explicit knowledge and vice versa (Cooke 2003; Crowley 2001; Gourlay 2002; McInerney 2002). It is an important component of the knowledge all workers have that allows them to perform their jobs. This **Alert** examines perspectives about the role of tacit knowledge in work and workplace learning.

Tacit knowledge, the knowledge that workers possess but do not articulate, is associated with terms such as "skill," "know-how," "working knowledge," and "expertise" that are used to describe knowledge about and ability to perform work (Cooke 2003; Farrell 2001; Hager 2000; Sveiby 1999). Learning that takes place through apprenticeships (Collis and Winnips 2002; Gamble 2001) draws heavily on tacit knowledge, and it has been connected with informal learning (Eraut 2000) and organizational learning (Collis and Winnips 2002; Lindley and Wheeler 2001). Recently, its role in knowledge management has been explored (Gourlay 2002; McInerney 2002).

From his review of the literature, Gourlay (2002) identifies two issues associated with tacit knowledge. The first is whether tacit knowledge is an individual trait or a trait that can be shared by both individuals and groups, and the second is whether tacit knowledge can be made explicit. To some degree these issues are interconnected, as one of the goals of making tacit knowledge explicit is to enable it to be shared throughout the organization (e.g., Collis and Winnips 2002; Lindley and Wheeler 2001). Because Sternberg and his colleagues "view all tacit knowledge simply as knowledge that has not been made explicit" (Gourlay 2002, p. 7), they (e.g., Sternberg and Hedlund 2002; Sternberg and Horvath 1999; Sternberg et al. 2001) have developed ways to measure tacit knowledge as have Richards and Busch (2000). If it is to be used in knowledge management systems, tacit knowledge needs be made explicit. McInerney (2002) suggests, however, that instead of "extract[ing] knowledge from within the employees to create new explicit knowledge artifacts," organizations should focus on creating a "knowledge culture" that encourages learning and the creation and sharing of knowledge (p. 1014). Bordum (2002) views the move to capture tacit knowledge in knowledge management systems as an exercise of power by managers over workers.

Other issues related to tacit knowledge have been raised by Hager (2000) and Farrell (2001). Hager suggests that tacit knowledge is an ambiguous concept, and in many cases labeling something tacit knowledge only renames a problem and therefore closes off further inquiry. Farrell discusses how globalization with its emphasis on a knowledge economy is leading to the redesign and standardization of local practices in many workplaces. When this happens, local knowledge, much of which is tacit, is discounted.

Tacit knowledge is an important element in work and workplace learning but one that needs to be examined closely in terms of how it is incorporated into organizational practices. Additional information can be found in the following resources.

Resources

Billett, S. "Co-Participation at Work: Knowing and Working Knowledge." In ***Working Knowledge: Productive Learning at Work Conference Proceedings***, edited by C. Symes. Sydney, Australia: University of Technology, 2000. (ED 451 388) http://www.governance.com.au/ravl/workingknowledge.htm

This paper proposes a basis to understand the learning of working knowledge through a practice referred to as co-participation at work, comprising reciprocity between the conduct of workplace activities and guidance, and how workers elect to engage with work practice. Knowing through co-participation at work results from the intersection of work practice with its situated factors and changing goals and socially derived ways of knowing that occur throughout one's working life.

Bordum, A. "From Tacit Knowing to Tacit Knowledge—Emancipation or Ideology?" ***Critical Quarterly*** 44, no. 3 (October 2002): 50-54.

In the knowledge management discourse, tacit knowing became tacit knowledge. Tacit knowledge contradicts many conceptions of knowledge. As used in many organizations, tacit knowledge is an ideology or a veil of power.

Collis, B., and Winnips, K. "Two Scenarios for Productive Learning Environments in the Workplace." ***British Journal of Educational Technology*** 33, no. 2 (2002): 133-148.

An important but unexploited form of productive learning relates to the capture and reuse of the tacit knowledge of members of the organization. This article discusses two approaches for this reuse of tacit knowledge, along with instructional strategies and technologies to support it.

Cooke, F. L. "Maintaining Change: The Maintenance Function and the Change Process." ***New Technology, Work and Employment*** 18, no. 1 (March 2003): 35-49.

This paper explores the organization of the maintenance function of five manufacturing and utility companies and the involvement of maintenance workers in plant improvement. The important role of tacit skills of maintenance workers is highlighted as well as the broader role of the maintenance function in technological change and organizational performance.

Crowley, B. "Tacit Knowledge, Tacit Ignorance, and the Future of Academic Librarianship." ***College and Research Libraries*** 62, no. 6 (November 2001): 565-584.

This theoretical essay uses tacit knowledge, the often-undocumented wisdom of expert practitioners and practitioner communities, to explore future prospects for the academic librarian. Definitions of tacit knowledge are included.

Eraut, M. "Non-Formal Learning and Tacit Knowledge in Professional Work." ***British Journal of Educational Psychology*** 70, no. 1 (2000): 113-136.

A typology of nonformal learning distinguishes between implicit learning, reactive on-the-spot learning, and deliberative learning. The problematic nature of tacit knowledge is discussed with respect to both detecting it and representing it.

Farrell, L. "Negotiating Knowledge in the Knowledge Economy: Workplace Educators and the Politics of Codification." ***Studies in Continuing Education*** 23, no. 2 (November 2001): 201-214.

A transcript of workplace interactions and other workplace texts are used to explore the part that workplace educators play in the politics of the codification of knowledge by determining "what counts" as knowledge in the global "knowledge" economy.

Fenwick, T. J. "Work Knowing "On the Fly": Enterprise Cultures and Co-Emergent Epistemology." ***Studies in Continuing Education*** 23, no. 2 (November 2001): 243-259.

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Proposes the conceptualization of work knowledge as co-emergence, based on the theory of enactivism. Discusses three dimensions of enactivism: (1) knowledge unfolds in systems; (2) understanding is embedded in relationships among systems, not in the minds of individual actors; and (3) learning is continuous invention and exploration, linked to disequilibrium in systems.

Gamble, J. "Modelling the Invisible: The Pedagogy of Craft Apprenticeship." ***Studies in Continuing Education*** 23, no. 2 (November 2001): 185-200.
Data from observations of cabinetmaking apprentices and masters were used to examine the structure of craft knowledge. Tacit transmission of knowledge and nonverbal modeling are the essence of apprenticeship, which is at odds with the current construction of skill learning as acquisition rather than transmission.

Gourlay, S. "Tacit Knowledge, Tacit Knowing or Behaving?" Paper presented at the Third European Conference on Organizational Knowledge, Learning, and Capabilities, Athens, Greece, April 2002. http://www.alba.edu/gr/OKLC2002/Proceedings/pdf_files/ID269.pdf
Although the term "tacit knowledge" is used in a variety of disciplines, it is a concept without consistency or clear foundation. The role of Polanyi in developing the idea of tacit knowledge is described, including how his conception as tacit knowing as process can provide a useful framework for conceptual and empirical work on knowledge.

Hager, P. "Know-How and Workplace Practical Judgement." ***Journal of Philosophy of Education*** 34, no. 2 (May 2000): 281-296.
In understanding the transformation of novices into proficient practitioners, theories of know-how and tacit knowledge have limited use. Examination of the dimensions of context that influence informal learning in the workplace supports practical judgment as an explanatory model.

Hegarty, S. "Teaching as a Knowledge-Based Activity." ***Oxford Review of Education*** 26, nos. 3-4 (2000): 451-465.
Five different ways of describing the knowledge base underlying teaching are described but none is considered satisfactory in terms of addressing how teachers access their knowledge base or how classroom behavior is affected by different knowledge inputs. A new model that is derived from an epistemological analysis of common sense is presented.

Jarvis, P. ***The Practitioner-Researcher: Developing Theory from Practice***. San Francisco, CA: Jossey-Bass, 1999.
This book examines the role of professional practitioner-researchers and the relationship among practice, practical knowledge, and theory. The role of tacit knowledge in the development of practical knowledge and in the conduct of practitioner research is described.

Lindley, E., and Wheeler, F. P. "Using the Learning Square." ***Learning Organization*** 8, no. 3 (2001): 114-124.
Depicts the Learning Square as a model of organizational learning processes with the following elements: multidimensional goals, shared vision, continual learning, and tacit knowledge. A case study illustrates the model's use in the development of information systems.

McInerney, C. "Knowledge Management and the Dynamic Nature of Knowledge." ***Journal of the American Society for Information Science and Technology*** 53, no. 12 (2002): 1009-1018.
Knowledge management (KM) or knowledge sharing in organizations is based on an understanding of knowledge creation and knowledge transfer. The transfer of tacit or implicit knowledge to explicit and accessible formats, the goal of many KM projects, is challenging, controversial, and endowed with ongoing management issues.

Polanyi, M. ***The Tacit Dimension***. Garden City, NY: Anchor Books, 1967.
Polanyi identified tacit human knowledge by reconsidering the obvious fact that individuals know more than they can tell. Practical experience tends to bridge the gap between what a teacher wants to tell and what the words mean. Individuals do not learn by theory alone; the important details that the teacher could not tell can only be perceived by practical experience.

Richards, D., and Busch, P. A. "Measuring, Formatting and Modelling Tacit Knowledge." Paper presented at International Congress on Intelligent Systems and Applications (ISA 2000), December 12-15, 2000. http://www.comp.mq.edu/au/~richards/papers/1514-138.pdf
A methodology aimed at better measuring tacit knowledge in an organizational context is provided. Although tacit knowledge has been difficult to capture, a triangulated methodology using psychological, sociological, and computational methods may prove more effective.

Shim, H. S.; Roth, G. L.; and Niemi, J. "Knowledge Management and Tacit Knowledge: Bah Humbug or Other Notions of *Ba*?" In ***Academy of Human Resource Development Proceedings, Minneapolis, MN, February 27-March 2, 2003***, edited by S. Lynham and T. M. Egan. Baton Rouge, LA: Academy of Human Resource Development, 2003.
The essence of knowledge management hinges on relationships among tacit knowledge, implicit knowledge, explicit knowledge, and the exchange or lack thereof of these forms of knowledge among individuals and the collective. This literature review explores the relationships of these concepts, featuring an explanation of *ba* (a Japanese concept that conveys the relationship of the individual to the collective) and its alignment to the SECI (socialization, externalization, combination, and internalization) model of knowledge conversion.

Sternberg, R. J., and Hedlund, J. "Practical Intelligence, *g*, and Work Psychology." ***Human Performance*** 15, nos. 1-2 (2002): 143-160.
General cognitive ability or *g* is considered by many to be the best single predictor of performance and learning across a variety of jobs but there are many factors, such as personality and motivational constructs, that should be considered in addition to *g*. Research on tacit knowledge as an aspect of practical intelligence is reviewed and the implications that practical intelligence has for work psychology are considered.

Sternberg, R. J., and Horvath, J. A., eds. ***Tacit Knowledge in Professional Practice. Researcher and Practitioner Perspectives***. Mahway, NJ: Lawrence Erlbaum, 1999.
Professionals often speak of "learning by doing" using professional "instinct" or "intuition." Social scientists use the concepts "implicit learning" and "tacit knowledge" to describe these activities that are part of professional practice. This book explores learning and professional practice in several different disciplines from the perspectives of both those in the workplace and social scientists who study their work.

Sternberg, R. J. et al. "The Relationship between Academic and Practical Intelligence: A Case Study in Kenya." ***Intelligence*** 29, no. 5 (2001): 401-418.
Reports on a study of the relationship between academic and practical intelligence in a sample of 85 young adolescents in a village in rural Kenya. Scores on a test of tacit knowledge correlated either trivally or significantly negatively with measures of academic intelligence and achievement. Among these villages, time spent on academic skills may be observed as time taken away from practical skills.

Sveiby, K. E. "Tacit Knowledge." De Vos Consultancy, 1999. http://it-consultancy.com/externa/sveiby-tacit.html
Polanyi's concept of tacit knowledge is used to define and distinguish tacit knowledge from other types of knowledge. A hierarchy of knowing that includes skill, know-how, and expertise is presented.

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Center on Education and Training for Employment
College of Education
The Ohio State University
1900 Kenny Road
Columbus OH 43210-1090

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